In the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

1 (currently amended). A method of determining patient compliance in taking a medication, comprising

providing to a patient a combination of a medication and an odorous marker detectable in gaseous exhaled breath, the combination to be taken by the patient as a result of the patient's own actions,

obtaining a sample of the patient's gaseous exhaled breath; and

analyzing the sample of the patient's breath to ascertain the presence or absence of said odorous marker in the patient's breath, where the presence of the odorous marker is an indication of patient compliance in taking the medication and the absence of the marker is an indication of patient non-compliance in taking the medication; wherein the medication is to be taken by volitional patient action at specified times;

based on the analysis, determining whether the patient was compliant in taking the medication.

2 (original). The method of claim 1 wherein the medication itself comprises said detectable marker.

3 (canceled).

4 (currently amended). The method of claim 1[[3]] wherein the sample of the patient's breath is analyzed to ascertain the presence or absence of said marker by sensor technology selected from the group consisting of semiconductor gas sensor technology and conductive polymer gas sensor technology.

5 (currently amended). The method of claim 4 wherein if the marker is present in the sample of the patient's breath, wherein the sensor technology is capable of producing[[es]] a unique electronic fingerprint to characterize the marker, and wherein the unique electronic fingerprint is an indication of the presence of the odorous marker in the patient's breath.

6 (previously amended). The method of claim 1 wherein the marker is selected from trans-Anethole (1-methoxy-4-propenyl benzene) - anise; Benzaldehyde (benzoic aldehyde) - bitter almond; Butyl isobutyrate (n-butyl 2, methyl propanoate) - pineapple; Cinnamaldehyde (3-phenylpropenal) - cinnamon; Citral (2-trans-3, 7-dimenthyl-2, 6-octadiene-1-al) - citrus; Menthol (1-methyl-4-isopropylcyclohexane-3-ol) - menthol; and alpha-Pinene (2, 6, 6-trimethylbicyclo-(3,1,1)-2-heptene) - pine.

7 (previously amended). The method of claim 1 wherein the sample of the patient's breath is analyzed to ascertain the presence or absence of said marker by a spectrophotometer.

8 (previously amended). The method of claim 1 wherein the sample of the patient's breath is analyzed to ascertain the presence of absence of said marker by mass spectrometer.

9 (original). The method of claim 1 wherein the marker is an additive combined with the medication.

10 (previously amended). The method of claim 1 wherein the marker is provided with the medication in the form of a coating on the medication.

11 (original). The method of claim 10 wherein a substance to stimulate salivation is included with the marker.

12 (original).The method of claim 1 wherein the marker is included with a liquid medication.

13 (original). The method of claim 1 wherein the marker is included with a pulmonary delivered medication.

14 (original). The method of claim 1 wherein the marker is included with an intranasal delivered medication.

15 (original). The method of claim 1 wherein the marker is included with intravenously delivered medication.

16 (previously amended). The method of claim 1 further comprising the step of recording results regarding the presence or absence of the marker as provided from the analysis of the sample of the patient's breath.

17 (currently amended). The method of claim 16, further comprising the step of transmitting the results from the analysis of the sample of the patient's breath to an individual interested in the results.

18 (previously amended). The method of claim 1 where the analysis of the sample of the patient's breath includes comparing any marker sensed in the sample of the patient's breath with a predetermined signature profile of a specific marker.

19 (original). The method of claim 18 wherein the predetermined signature profile of a specific marker is associated with a specific drug.

20 (original). The method of claim 18 wherein the predetermined signature profile of a specific marker is associated with a class of drugs.

21 (original). The method of claim 1 further comprising the step of capturing the sample of the patient's breath in a vessel prior to analysis.

22 (original). The method of claim 1 further comprising the step of dehumidifying the sample of the patient's breath prior to analysis.

23 (currently amended). The method of claim 1 wherein if the medication and detectable marker are taken by the patient by volitional action, and wherein the odorous marker is one that is capable of [[first]] reacting[[s]] with enzymes in the patient's mouth to be detectable.

24 (currently amended). The method of claim 1 wherein if the medication and detectable marker are taken by the patient by volitional action, and wherein the odorous marker is one that is capable of [[first]] reacting[[s]] with acids in the patient's stomach to be detectable.

25 (currently amended). The method of claim 1 wherein if the medication and detectable marker are taken by the patient by volitional action, and wherein the odorous marker is one that is capable of being absorbed in the patient's gastrointestinal tract and excreted in the lungs.

26 (currently amended). The method of claim 1, further comprising the steps of: if it is determined that the patient was compliant in taking the medication, analyzing the sample of the patient's breath to ascertain the concentration of said odorous marker in the patient's breath, where the ~~analysis of the sample of the patient's breath includes assessing~~ marker concentration correlates with ~~and, thus,~~ medication concentration~~, where the marker is present~~.

27 (original). The method of claim 1 further comprising the step of identifying a baseline marker spectrum for the patient prior to the patient's taking of the medication.

28 (canceled).

29 (previously amended). A method of producing medication which is detectable as an indication of patient compliance in taking the medication comprising the steps of:

identifying an odorous marker substance detectable in gaseous exhaled breath, and

combining a medication with said odorous, detectable marker substance, wherein said medication is to be taken by volitional patient action at specified times whereby subsequent analysis of the patient's breath will confirm the presence or absence of said marker substance and thus indicate whether the patient has complied in taking said medication.

30 (original). The method of claim 1 wherein the marker is included with transdermally delivered medication.